

CLAIMS.

1.- Device for the inspection of products, whereby this device (1) comprises
5 means to convey these products (2) over a track (4) in the shape of a product flow (5) extending in the width, characterised in that it comprises at least one scanner (9-10) to inspect the products (2), whereby this scanner (9-10) is situated on one side of the aforesaid track (4).

2.- Device according to claim 1, characterised in that it comprises at least
10 two scanners (9-10), situated on either side of the aforesaid track (4) respectively, and in that
they scan the products (2) as of the lower side and/or rear side, in particular in a slanting
direction.

3.- Device according to claim 1 or 2, characterised in that the above-mentioned scanner or scanners (9-10) are situated, seen from above, entirely beside the aforesaid track (4).

15 4.- Device according to any of claims 1 to 3, characterised in that the scanner (9-10), scanners (9-10) respectively, are erected mainly according to vertical planes (V4-V5) with their longitudinal direction, along the sides of the aforesaid track (4).

20 5. - Device according to claim 4, characterised in that it comprises bending mirrors (20) in order to realise a scanning in a plane which is diagonal to the aforesaid track (4), which are mainly erected in the aforesaid planes (V4-V5).

6.- Device according to any of claims 1 to 5, characterised in that it comprises one or several adjusting facilities, selected from the following series:

- adjusting means in order to change the position and/or size of the angle (K1-K2) over which is being scanned;
- adjusting means in the shape of control elements with which such a scanner (9-10) can be turned in the aforesaid vertical plane (V4-V5);
- adjusting means in the shape of one or several bending mirrors (20) whose angle can be set.

25 7.- Device according to any of claims 1 to 6, characterised in that at least
30 one of the scanners (9-10) situated on one side of the aforesaid track (4) comprise one or several facilities to safeguard its good working order against negative influences, selected

from the following series:

- a screen (21) which protects the scanner (9-10) at least on its side directed towards the aforesaid track (4), and preferably also on the top side;
- a mainly closed screen (21) which surrounds the scanner (9-10) and possible other elements, such as mirrors, and which is provided with a window (22) via which the scanner (9-10) can observe the products (2);
- an entirely closed screen (21) which surrounds the scanner (9-10) and possible other elements, such as mirrors, and which is provided with a closed light and/or radiation-transmitting window (22) via which the scanner (9-10) can observe the products (2);
- 10 - a cleaning device (26);
- a cleaning device (26) which works in conjunction with a window (22) in a screen (21);
- a cleaning device (26) in the shape of a wiper (28).

8.- Device according to any of claims 1 to 7, characterised in that the means for moving the products (2) along a track (4) consist of a conveyor belt (6), which is erected such that the products (2) leave this conveyor belt (6) near its far end, and in that the above-mentioned scanner or scanners (9-10) operate in a plane (V3) immediately following this conveyor belt (6).

9.- Device according to any of claims 1 to 8, characterised in that it comprises at least one additional scanner (13) which inspects the products (2) as of the top side or front side.

10.- Device according to any of claims 1 to 9, characterised in that it comprises a unit (14) for sorting the inspected products (2), driven by means of a control unit (15) which is controlled by the above-mentioned scanner or scanners (9-10).

25 11.- Device according to any of claims 7 to 10, characterised in that the above-mentioned window forms an angle of 90° at the most, as of its side directed towards the product flow, with a horizontal plane extending as of the lower edge of the window.

12.- Device according to claim 11, characterised in that said angle is bigger than 70°, in particular bigger than 80°, and smaller than or equal to 90°.

30 13.- Device according to any of claims 11 or 12, characterised in that the window extends almost vertically.

14.- Device according to any of claims 7 to 13, characterised in that means, such as a blowing device, are provided in order to create an air flow, in particular an air flow in the shape of a curtain, along the side of the window directed towards the product flow.

5 15.- Device according to any of claims 7 to 14, characterised in that the above-mentioned window is sealed by means of a light and/or radiation-transmitting material.

16.- Device according to any of claims 1 to 15, characterised in that an air flow is provided between the above-mentioned scanner and the above-mentioned product flow, in particular an air flow in the shape of a curtain, in order to safeguard the scanner against pollution.

10 17.- Method for the inspection of products, whereby these products (2) are conveyed along a track (4) in the shape of a product flow (5) extending in the width and whereby these products (2) are scanned, characterised in that at least one scanner (9-10) is applied which is situated on one side (11-12) of the aforesaid track (4).

15 18.- Method according to claim 17, characterised in that at least two scanners (9-10) are used, which are situated on either side respectively of the aforesaid track (4).

19.- Method according to claim 18, characterised in that the two scanners (9-10) operate according to any of the following possibilities:

20 - that they each scan a part of the product flow (5), such that together they scan the entire product flow (5);
- that they both scan the entire product flow (5).

20.- Method according to any of the preceding claims, characterised in that the above-mentioned products (2) are scanned by means of the above-mentioned scanner or scanners (9-10) along the lower side and/or rear side, in particular slantingly at an angle.

25 21.- Method according to any of the preceding claims, characterised in that the products (2) are scanned by means of the above-mentioned scanner or scanners (9-10) while performing a coasting flight motion.

30 22.- Method according to any of the preceding claims, characterised in that the above-mentioned products (2) are also scanned as of the top side and/or front side by means of at least one additional scanner (13).

23.- Method according to any of the preceding claims, characterised in that

it is used for sorting the above-mentioned products (2), whereby, as a function of the data obtained by means of the scanning, an automatic selection is carried out.

24.- Method according to any of the preceding claims, characterised in that the products (2) are scanned as of at least three sides, according to main directions (R1-R2-R3) which are rotated at least 90° in relation to each other, and better still which are rotated about 120° in relation to each other.

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